

REMARKS

Claims 1, 5, and 7 are pending in the present application. Claims 2-4, 6, 8, and 9 are cancelled without prejudice. Claims 1, 5, and 7 are herein amended.

Applicant's Response to the Rejection under 35 U.S.C. § 103

Claims 1-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wakimoto (JP 57-111000) in view of Yoshiyuki (JP2000-015635) in further view of GB 1,507,138 (GB '138). Favorable reconsideration is earnestly solicited.

The Office Action asserts that each of these references discloses a method of waste disposal in which solid waste is exposed to high temperature steam in an oxygen free state to be carbonized. The Office Action recognizes that none of these documents specifically teach the step of exposing the resulting solid residue wastes to a low-temperature steam as claimed, but that the references disclose collecting the residue for further use or treatment. It is asserted that because the prior art teaches adjusting the steam temperature, further cooling of the thermally cracked solid organic waste via low-temperature steam would have been obvious.

It is recognized by the Office Action that a low-temperature range is not disclosed by any of the references. See page 4, lines 16-19. The Office Action asserts that the references disclose further use and treatment of the solid residue and exhaust gas, but provides no support for this. While the prior art may suggest the further use and treatment of the residue and gas, it does not suggest the further use and treatment of the residue and gas by a low-temperature steam. Applicants respectfully traverse the rejection on the grounds that prima facie obviousness has not been shown.

In fact, each of the references teaches away from the use of a low-temperature steam. Wakimoto discloses heating closed container 2 indirectly by combustion of the burner 3 to a temperature of 450 to 850 °C, at which the wastes decompose. The steam and gas generated by this decomposition are then supplied to scrubber body 8 which is maintained at 60 to 80 °C. There is no disclosure of a steam treatment in this scrubber body. Thus, Wakimoto teaches away from treatment with a low-temperature steam because it teaches the lack of a steam treatment to cool the waste.

In Yoshiyuki, wastes are preheated at 200 to 300 °C, and then further heated to a 300 to 450 °C in a high steam concentration. Ultimately, the exhaust gas is treated at 750-1000 °C. See machine translation, paragraph 63. Thus, Yoshiyuki teaches away from the use of low-temperature steam because it discloses the use of high-temperature steam instead.

Finally, GB '138 discloses decomposing wastes by superheated steam having a temperature of 500 to 900 °C. In GB '138, the residue is separated into gas, which is recirculated, and liquid, which is separated into oil and water. Thus, GB '138 teaches away from the claimed invention because it teaches recirculation and reuse of the waste residue without a steam treatment.

In the claimed invention, the wastes carbonized by being exposed to high temperature steam are exposed to low temperature steam having a temperature of 100 to 120 °C in order to assure that they are in a non-flammable state when exhausted into the air. After being cooled to this temperature, the carbonized wastes remain dry and do not start burning in the air. Then, the steam which has been used to dispose the wastes is exposed to a high temperature of 800 °C or higher by being mixed into the exhaust gas generated from the boiler or the steam superheater. This deodorizes the used steam, and assures that harmful substances such as dioxins can be

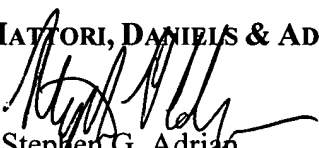
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removed. Applicant respectfully submits that the claimed method is non-obvious, and traverses the rejection. Favorable reconsideration is respectfully requested.

For at least the foregoing reasons, the claimed invention distinguishes over the cited art. Favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone Applicant's undersigned attorney.

If this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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